

# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FII	LING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/604,636	0	8/06/2003	Kyra Moellmann	LASP: 129US 1635	
24041	7590	12/27/2005		EXAMINER	
SIMPSON &		ON, PLLC		WILLIAM	S, DON J
5555 MAIN S WILLIAMS		Y 14221-5406		ART UNIT PAPER NUMBER	
	•			2878	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)  MOELLMANN, KYRA	
Office Action Cummons	10/604,636		
Office Action Summary	Examiner	Art Unit	
	Don Williams	2878	
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the c	orrespondence add	iress
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DATE of the may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  If NO period for reply is specified above, the maximum statutory period well. Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this cor D (35 U.S.C. § 133).	
Status			
1) Responsive to communication(s) filed on 06 Au	.aust 2003.		
	action is non-final.		
3) Since this application is in condition for allowan		secution as to the	merits is
closed in accordance with the practice under E	x parte Quayle, 1935 C.D. 11, 45	53 O.G. 213.	
Disposition of Claims			
<u> </u>			
4) Claim(s) <u>1-15</u> is/are pending in the application.	un from consideration		
4a) Of the above claim(s) is/are withdraw 5) ☐ Claim(s) is/are allowed.	vii nom consideration.		
6)⊠ Claim(s) is/are allowed.			
7) Claim(s) <u>1-10</u> is/are rejected.			
8) Claim(s) are subjected to.	election requirement		
o/ Claim(s) are subject to restriction and/or	election requirement.		
Application Papers			
9) The specification is objected to by the Examiner	r.		
10)⊠ The drawing(s) filed on <u>06 August 2003</u> is/are:	a)⊠ accepted or b)□ objected t	to by the Examiner	•
Applicant may not request that any objection to the o	drawing(s) be held in abeyance. See	∋ 37 CFR 1.85(a).	
Replacement drawing sheet(s) including the correction	on is required if the drawing(s) is obj	jected to. See 37 CFI	R 1.121(d).
11) The oath or declaration is objected to by the Exa	aminer. Note the attached Office	Action or form PTO	<b>D-152</b> .
Priority under 35 U.S.C. § 119			
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:	priority under 35 U.S.C. § 119(a)	-(d) or (f).	
1. Certified copies of the priority documents	s have been received.		
2. Certified copies of the priority documents		on No.	
3. Copies of the certified copies of the priori	• •		Stage
application from the International Bureau	•		,g.
* See the attached detailed Office action for a list of	• • • • • • • • • • • • • • • • • • • •	ed.	
	·		
Attachment(s)			
1) Notice of References Cited (PTO-892)  Notice of Draftsperson's Patent Drawing Povious (PTO 048)	4) Interview Summary Paper No(s)/Mail Da	,	
2) Motice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) Notice of Informal P	<del></del>	·152)
Paper No(s)/Mail Date	6)		

Application/Control Number: 10/604,636

Art Unit: 2878

#### **DETAILED ACTION**

This Office Action is in response to the Applicant's application filed on August 06, 2003.

Applicant's arguments with respect to claims 1-15 have been considered but are most in view of the new ground(s) of rejection.

## Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Engelhardt et al (6,958,858).

As to claim 1, Engelhardt et al disclose light sources for the illumination of microscopic specimens (27) comprising a first laser (1) and a second laser (3) wherein

figure 1, column 4, lines 55-67).

each emits light (5, 7) into a first beam path and into a second beam path; an optical combining means (9) being introduced in the first and in the second beam path; and a displaceable deflection unit (17) for setting a path length difference between the light (5) of the first laser (1) and the light (7) of the second laser (3), (see column 1, lines 18-55,

As to claim 2, Engelhardt et al disclose the first laser (1) and the second laser (3) are short-pulse lasers that are passively synchronized with one another, (see figure 1, column 4, lines 15-18 and lines 55-67).

As to claim 3, Engelhardt et al disclose a measurement unit (31) for ascertaining cross-correlation is provided, which receives a portion of the light (5) of the first laser (1) and a portion of the light (7) of the second laser (3), and is used to ascertain a setting signal for adjusting the synchronization or controlled delay of the laser pulses of the first laser (1) and/or the second laser (3), (see figure 1, column 4, lines 55-67, column 5, lines 1-5).

As to claims 4, Engelhardt et al disclose the first laser is a Ti:sapphire laser, (see figure 2, column 5, lines 50-53).

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

<sup>(</sup>a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Application/Control Number: 10/604,636

Art Unit: 2878

Claims 5-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhardt et al in view of Simon et al (6,356,088) and (6,466,040).

As to claims 5 and 13, Engelhardt et al disclose a second laser (3). Engelhardt et al fail to explicitly teach the second laser is a Nd:YVO4 laser type. Simon et al disclose different lasers such as Nd:YAG laser. It would have been obvious for one ordinary skill in the art to modify Engelhardt et al to include a different laser such as Nd:YAG as disclosed by Simon et al to distinguish the light beams intensity strength and wavelength difference along the optical beam path, (see figure 4, column 5, lines 58-64).

As to claims 6 and 14, Engelhardt et al disclose the first laser (1), the second laser (3), the displaceable deflection unit (17), the optical combining means (9, 21, 23, 25), and the measurement unit (31) for ascertaining cross-correlation of the first laser beam (5) and the second laser beam (7). Engelhardt et al fail to disclose the diode laser and scan module. Simon et al disclose a monitor diode laser and a scan module. It would have been obvious for one ordinary skill in the art to modify Engelhardt et al to include a monitor diode laser located inside a scan module wherein the scan module has been engineered in a highly compact form as disclosed by Simon et al to improve the short pulse laser intensities which allow reflected distinguished wavelength signals from the specimen to be detected and converted into an electrical signal allowing a clear and precise image to be displayed on the monitor in order to perform further critical analysis of the specimen, (see column 1, lines 64-67, figure 2, column 5, lines 35-37).

Application/Control Number: 10/604,636

Art Unit: 2878

As to claim 7, the modified Engelhardt et al disclose the module is flangemounted onto an optical examination apparatus for microscopic specimens, (see column 2, lines 15-18).

As to claim 8, Engelhardt et al discloses a beam deflection device (17) for guiding an illuminated light beam, a microscope optical system (25) for focusing the beam of light, a detector (31) for converting the reflected beam of light, light sources (1, 3) which emits a combined light beam (11) generated by a first laser (1) and a second laser (3), optical combining means (9, 21, 25) for the synchronization of light (5) from the first laser (1) and light (7) from the second laser (3). Engelhardt et al fail to explicitly teach a displaceable deflection unit. Simon et al disclose a two dimensional deflection unit. It would have been obvious for one ordinary skill in the art to modify Engelhardt et al to include a two dimensional deflection unit as disclosed by Simon et al to distinguish the light beams intensity strength and wavelength difference along the optical beam path, (see figure 3, column 3, lines 45-50).

As to claim 9, the modified Engelhardt et al disclose the first laser (1) with a first beam path (5) and the second laser (3) with a second beam path (7), and the optical combiners (9, 21, 25) for the combining of the first beam (5) and the second beam (7), (see figure 1, column 4, lines 55-67).

As to claim 10, the modified Engelhardt et al disclose beam path (5) of the first laser (1) and beam path (7) of the second laser (3). The modified Engelhardt et al fail to disclose a displaceable deflection unit. Simon et al disclose a two dimensional deflection unit (6). It would have been obvious for one ordinary skill in the art to modify

Engelhardt et al to include a two dimensional deflection unit as disclosed by Simon et al to distinguish the light beams intensity strength and wavelength difference along the

optical beam path, (see figure 3, column 3, lines 45-50).

As to claim 11, the modified Engelhardt et al disclose the light sources (1, 3) are equipped with a measurement unit (31) for ascertaining cross-correlation which receives a portion of the light (5) of the first laser (1) and a portion of the light (7) of the second laser (3), and can be used to ascertain a setting signal for adjusting the synchronization or controlled delay of the laser pulses of the first laser (1) and/or the second laser (3), (see figure 1, column 4, lines 55-67).

As to claims 12, Engelhardt et al disclose the first laser is a Ti:sapphire laser, (see figure 2, column 5, lines 50-53).

As to claim 15, the modified Engelhardt et al disclose a computer (43) with a display (47) connected to the scan module wherein adjustment data and adjustment aids for synchronization of the first and second laser are displayed for the user, (see figure 1, column 5, lines 29-49).

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don Williams whose telephone number is 571-272-8538. The examiner can normally be reached on 8:30a.m. to 5:30a.m..

Art Unit: 2878

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephone B. Allen
Stephone B. Allen
Drimary Examiner